

REMARKS/ARGUMENTS

Reexamination of the captioned application is respectfully requested.

A. SUMMARY OF THIS AMENDMENT

By the current amendment, Applicants basically:

1. Editorially amend claims 1, 4, 26, and 33.
2. Editorially amend claim 26 to moot the rejection under 35 USC § 112, second paragraph, set forth in enumerated paragraph 7 of the office action.
3. Editorially amend claim 4 to moot the objection set forth in enumerated paragraph 3 of the office action.
4. Cancel claims 12, 15, and 18 without prejudice or disclaimer, thereby mooting enumerated paragraph 5 of the office action.
5. Add new dependent claim 35.
6. Respectfully traverse all prior art rejections.

B. PATENTABILITY OF THE CLAIMS

Claims 1, 4, 6, 8, 10, 13, 16, 19-22, 24-25 and 27 stand rejected under 35 USC 103(a) as being unpatentable over AAPA (page 1, line 8 to page 9, line 2 of the specification and Figs. 12 and 13) in view of JP 07-128685 to Matsuo. Claims 3, 5, 7, 9, 11, 14, 17 and 23 stand rejected under 35 USC 103(a) as being unpatentable over JP 07-128685 to Mutsumi in view of U.S. Patent 6,396,470 to Zhang et al. All prior art rejections are respectfully traversed for at least the following reasons.

The office action now essentially contends that it would be obvious to provide prior art structure such as that shown in Fig. 13 of applicant's specification with a gap such as that taught by JP 07-128685 in order to reduce capacitive coupling of a pixel electrode and a source line (see, e.g., the last paragraph on page 6 of the office action).

Applicants vigorously traverse the prior art rejections, especially with respect to independent claims 1, 21, 27, and 33. JP 07-128685 would instead suggest that the black matrix of prior art Fig. 13 be made as a conductor in order to form a storage capacitor with the pixel electrodes in the manner described by JP 07-128685 (e.g., in paragraph [0021] of the translation already provided). JP 07-128685 seeks to solve display problems by providing uniform storage capacitance, and more specifically by making the black mask a conductor.

Applicants see no specific mention or suggestion in JP 07-128685 of a gap nor attachment of any significance to a gap for preventing parasitic capacitance between a pixel electrode and source line. Such non-recognition or non-emphasis by JP 07-128685 of any supposed gap confines the contribution of JP 07-128685 to the conductive nature of the black mask. Even if somehow the reader of JP 07-128685 were also to note any "gap", that such gap would be taken in combination with the conductive nature of the black mask and therefore would not suggest an insulative black mask in a gap between the pixel electrode and source line.

From paragraph [0005] of JP 07-128685 it is understood (with reference to the structure illustrated in Fig. 7) that source line 2 and pixel electrode 3 are positioned close to each other, so that capacitive coupling causes change of the source line potential to have an influence on the pixel potential. As a result, a voltage-transmittance property in a vertical direction of the panel becomes uneven and crosstalk occurs more conspicuously in the structure of Fig. 6 and Fig. 7 than the cases of Figs. 4 and 5".

However, as disclosed by paragraph [0004] of JP 07-128685, it is conventional that a liquid crystal display device needs to have a narrower black mask (BM) for a higher aperture. Thus, as also is the case in Fig. 7, the BM 8 is made narrower by

disposing the pixel electrode 3 over the source line 2, thereby increasing the aperture. JP 07-128685 thus does not describe a gap provided so as to solve the problem described in the paragraph [0005].

To solve its cross talk problem, JP 07-128685 requires that its source line be shielded by a BM which is conductive and has a specific potential, thereby preventing crosstalk (paragraphs [0022] and [0023]. From paragraph [0016] of JP 07-128685 it is understood that capacitances of the source line and the light shielding film are reduced as much as possible so as to reduce the deflection, which is a reason for which there is a region where the BM8 is segmented along the gate line 1 and the source line 2 has a region which is not covered by the BM8.

That is, JP 07-128685 describes an arrangement wherein the conductive BM is formed so that the source line is covered by the BM and the pixel electrode is overlapped by the BM, so as to prevent crosstalk. Moreover, a storage capacitor is formed on a portion where the pixel electrode and the BM overlap each other, and a width of a portion in which the BM and the source line overlap each other is reduced so that the coupling capacitance between the BM and the source line (which is caused by the conductivity of the BM) is reduced. Thus, the structure of Fig. 1 of JP 07-128685 was devised in view of fact that the BM has conductivity and the specific potential.

Other limitations of the independent claims and of the dependent claim also have patentable merit. Regarding independent claim 33, for example, JP 07-128685 does not recognize the display-affecting characteristic of the overlap of the second pixel electrode and the light shielding film having a width y .

The office action makes an impermissible leap in hindsight in concluding that gap size or overlap size would be a matter of optimization when the factor contributing to the benefit is not recognized. Applicants respectfully request that the rejections be withdrawn and all claims allowed.

C. MISCELLANEOUS

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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